Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: XTO Energy, Inc.
Well Name/Number: Donna 31X-15
Location: NW NE Section 15 T24N R56E
County: Richland **, MT; Field (or Wildcat)** Wildcat

Air Quality

(possible concerns)
Long drilling time: No, 30-40 days drilling time.
Unusually deep drilling (high horsepower rig): Triple derrick rig 1000 HP to drill a single lateral horizontal Bakken Formation well, 19,897'MD/10,456'TVD.
Possible H2S gas production: Slight
In/near Class I air quality area: No Class I air quality area.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
_X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____
Comments: Existing gas pipelines in the area.

Water Quality

(possible concerns)
Salt/oil based mud: Yes to long string hole will be drilled with oil based invert drilling fluids. Horizontal hole to be drilled with brine water. Surface casing hole to be drilled with freshwater and freshwater mud.
High water table: No high water table anticipated.
Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to the Three Buttes Creek, about 1/8 mile to the south from this location.
Water well contamination: No, closest water wells are 1 mile and further from this location. 1900' of surface casing will be set and cemented to surface to protect groundwater.
Porous/permeable soils: No, sandy silty clay soils.
Class I stream drainage: No, Class I stream drainages.

Mitigation:
__ Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
_X Closed mud system
_X Off-site disposal of solids/liquids (in approved facility)
__ Other: _____
Comments: 1900' surface casing well below freshwater zones in adjacent water wells. Also, covering Fox Hills aquifer. Adequate surface casing and BOP equipment to prevent problems. Operator found coal seams when constructing the reserve pit. Opted to reclaim the pit immediately and convert to a closed mud system with offsite disposal of cuttings and reserve pit fluids.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: None, utilizing exiting roads and crossings.
High erosion potential: Yes, moderate cut up to 22.7' and moderate fill up to 20.9', required.

Loss of soil productivity: _None, location to be restored after drilling well, if nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, large well site 430'X330'
Damage to improvements: Slight, surface use appears to be hay field.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Access will be over existing county road, #334. An access will be built from the existing county road into this location, about 0.5 miles will be required. Oil based drilling fluids will be recycled. Freshwater surface hole cuttings will be buried on site. Oil based drill cuttings will hauled to an offsite disposal. Completion pit fluids will be hauled to a licensed saltwater disposal. No reserve pit to be utilized with this closed mud system. No concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Yes, residences, about ¼ of a mile to the northeast from this location.
Possibility of H2S: _Slight
Size of rig/length of drilling time: Triple drilling rig 30 to 40 days drilling time.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: _Adequate surface casing, 1900', cemented to surface with working BOP stack should mitigate any problems. Noise should not be a problems, sufficient distance from residence to rig should mitigate this.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None identified.
Proximity to recreation sites: _None identified.
Creation of new access to wildlife habitat: No
Conflict with game range/refuge management: _No
Threatened or endangered Species: __Threatened or endangered species identified by USFWS in Richland County are the Pallid Sturgeon, Whooping Crane, Interior Lease Tern and Piping Plover. Candidate species are the Sprague's Pipit and the Greater Sage Grouse. NH tracker website lists no species of concern in this Township and Range.

Mitigation:
__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DSL)
__ Screening/fencing of pits, drillsite
__ Other:_____
Comments: __Surface location on private surface. No concerns

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites: None identified

Mitigation

__ avoidance (topographic tolerance, location exception)

__ other agency review (SHPO, DSL, federal agencies)

__ Other:

Comments: Private surface. No concerns.

Social/Economic

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: No concerns

Remarks or Special Concerns for this site

Single lateral horizontal Bakken Formation well, 19,897'MD/10,456'TVD.

Summary: Evaluation of Impacts and Cumulative effects

No long term impact expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: February 16, 2011

Other Persons Contacted:

(Name and Agency)

Montana Bureau of Mines and Geology, Groundwater Information Center website.

(subject discussed)

Water wells in Richland County

(date)

February 16, 2011

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

February 16, 2011
(date)

Montana Natural Heritage Program Website
(Name and Agency)
Heritage State Rank= S1, S2, S3 in T24N R56E
(subject discussed)

_February 16, 2011 _____
(date)

If location was inspected before permit approval:
Inspection date: _ _____
Inspector: _ _____
Others present during inspection: __ _____